#4

SEQUENCE LISTING

<110> PROCYON BIOPHARMA INC.

<120> PHARMACEUTICAL PREPARATIONS AND METHODS FOR INHIBITING TUMORS

<130> 06508-030-US-03

<140> US 09/977,406
<141> 2001-10-15

<150> CA 2,321,256
<151> 2000-10-16

<150> CA 2,355,334
<151> 2001-08-20

<160> 92

<170> PatentIn version 3.1

<210> 1
<211> 94
<212> PRT
<213> Homo sapiens

<300>
<301> Ulvsback, M., Lindstrom, C., Weiber, H., Abrahamson, P.A., Lilja, H., and Lundwall, A"
<302> Molecular cloning of a small prostate protein, known as beta-microsemenoprotein, PSP94 or beta-inhibin, and demonstration of transcripts in non-genital tissues.
<303> Biochem. Biophys. Res Commun.
<304> 164
<305> 3
<306> 1310-1315
<307> 1989
<308> GI 131436
<309> 1988-08-01

<400> 1

Ser Cys Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg
1 5 10 15

Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp
20 25 30

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Ile Ser
35 40 45

Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp Asn Cys
50 55 60

Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val Glu Lys
65 70 75 80

Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu Trp Ile Ile
85 90

<210> 2
<211> 102
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<213> Artificial Sequence

<220>
<223> recombinant human PSP94 (rHuPSP94) produced from yeast

<400> 2

Glu Ala Glu Ala Tyr Val Glu Phe Ser Cys Tyr Phe Ile Pro Asn Glu
1 5 10 15

Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn
20 25 30

Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys
35 40 45

Thr Cys Tyr Glu Thr Glu Ile Ser Cys Cys Thr Leu Val Ser Thr Pro
50 55 60

Val Gly Tyr Asp Lys Asp Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp
65 70 75 80

Cys Lys Tyr Ile Val Val Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser
85 90 95

Val Ser Glu Trp Ile Ile
100

<210> 3
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> decapeptide

<400> 3

Tyr Thr Cys Ser Val Ser Glu Pro Gly Ile
1 5 10

<210> 4
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide 7-21

<400> 4

Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu
1 5 10 15

<210> 5
<211> 15
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<213> Artificial Sequence

<220>
<223> PCK3145 (polypeptide 31-45)

<400> 5

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
1 5 10 15

<210> 6
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide 76-94

<400> 6

Ile Val Val Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu
1 5 10 15

Trp Ile Ile

<210> 7
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide used in the amplification and cloning of rHPSP94

<400> 7
gggaagaatt ctcatgctat ttcata 26

<210> 8
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
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<400> 8
tggatatctg cagaattcgg c 21

<210> 9
<211> 285
<212> DNA
<213> Homo sapiens

<300>
<301> Green, C.B., Liu, W.Y. and Kwok, S.C.
<302> Cloning and nucleotide sequence analysis of the human beta-microseminoprotein gene.
<303> Biochem. Biophys. Res. Commun.
<304> 167
<305> 3
<306> 1184-1190
<307> 1990
<308> GI 514370
<309> 1995-01-07

<400> 9
tcatgctatt tcatacctaa tgagggagtt ccaggagatt caaccaggaa atgcatggat 60

ctcaaaggaa acaaacaccc aataaactcg gagtggcaga ctgacaactg tgagacatgc 120

acttgctacg aaacagaaat ttcatgttgc acccttgttt ctacacctgt gggttatgac 180

aaagacaact gccaaagaat cttcaagaag gaggactgca agtatatcgt ggtggagaag 240

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<210> 10
<211> 16
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<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 10

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

<210> 11
<211> 17
<212> PRT
<213> Artificial Sequence

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<400> 11

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile

<210> 12
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 12

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser

<210> 13
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 13

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys

<210> 14
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 14

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys
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<210> 15
<211> 21

<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 15

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr
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<210> 16
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 16

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu
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<210> 17
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 17

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val
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<210> 18
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 18

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser
            20
```

<210> 19
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 19

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr
            20                  25
```

<210> 20
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 20

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro
            20                  25
```

<210> 21
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 21

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val
            20                  25
```

<210> 22
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 22

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly
20 25

<210> 23
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 23

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr
20 25

<210> 24
<211> 30
<212> PRT
<213> Artificial Sequence

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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 24

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp
20 25 30

<210> 25
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 25

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys
20 25 30

<210> 26
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 26

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

<210> 27
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
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<400> 27

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn

<210> 28
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 28

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys

<210> 29
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 29

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln
35

<210> 30
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
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<400> 30

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg
35

<210> 31
<211> 37
<212> PRT

<213> Artificial Sequence

<220>
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<400> 31

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile
35

<210> 32
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 32

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe
35

<210> 33
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
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<400> 33

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys
35

<210> 34
<211> 40
<212> PRT
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<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 34

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys
35 40

<210> 35
<211> 41
<212> PRT
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<220>
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<400> 35

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu
35 40

<210> 36
<211> 42
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 36

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp

20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp
35 40

<210> 37
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
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<400> 37

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys
35 40

<210> 38
<211> 44
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 38

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys
35 40

<210> 39
<211> 45
<212> PRT
<213> Artificial Sequence

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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 39

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr
        35                  40                  45
```

<210> 40
<211> 46
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 40

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile
        35                  40                  45
```

<210> 41
<211> 47
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 41

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val
        35                  40                  45
```

<210> 42
<211> 48
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 42

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

<210> 43
<211> 49
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 43

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu

<210> 44
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 44

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys
50

<210> 45
<211> 51
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 45

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys
50

<210> 46
<211> 52
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 46

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys Asp
50

<210> 47

<211> 53
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 47

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys Asp Pro
50

<210> 48
<211> 54
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 48

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys Asp Pro Lys
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<210> 49
<211> 55
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 49

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
        35                  40                  45

Glu Lys Lys Asp Pro Lys Lys
    50                  55
```

<210> 50
<211> 56
<212> PRT
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<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 50

```
Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
        35                  40                  45

Glu Lys Lys Asp Pro Lys Lys Thr
    50                  55
```

<210> 51
<211> 57
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 51

```
Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
```

35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr Cys
50 55

<210> 52
<211> 58
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 52

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser
50 55

<210> 53
<211> 59
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 53

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val
50 55

<210> 54
<211> 60

<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 54

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser
50 55 60

<210> 55
<211> 61
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 55

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu
50 55 60

<210> 56
<211> 62
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 56

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu

```
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
        35                  40                  45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu Trp
    50                  55                  60
```

<210> 57
<211> 63
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 57

```
Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
        35                  40                  45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu Trp Ile
    50                  55                  60
```

<210> 58
<211> 64
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 58

```
Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp
            20                  25                  30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val
        35                  40                  45
```

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu Trp Ile Ile
50 55 60

<210> 59
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 59

Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
1 5 10 15

<210> 60
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 60

Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu
1 5 10 15

Thr

<210> 61
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 61

Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr
1 5 10 15

Glu Thr

<210> 62
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 62

Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys
1 5 10 15

Tyr Glu Thr

<210> 63
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 63

His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr
1 5 10 15

Cys Tyr Glu Thr
20

<210> 64
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 64

Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys
1 5 10 15

Thr Cys Tyr Glu Thr
20

<210> 65
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 65

Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr
1 5 10 15

Cys Thr Cys Tyr Glu Thr
20

<210> 66
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 66

Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu
1 5 10 15

Thr Cys Thr Cys Tyr Glu Thr
20

<210> 67
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 67

Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys
1 5 10 15

Glu Thr Cys Thr Cys Tyr Glu Thr
20

<210> 68
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 68

Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn
1 5 10 15

Cys Glu Thr Cys Thr Cys Tyr Glu Thr
20 25

<210> 69

<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 69

Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp
1 5 10 15

Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
20 25

<210> 70
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 70

Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr
1 5 10 15

Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
20 25

<210> 71
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 71

Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln
1 5 10 15

Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
20 25

<210> 72
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 72

Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp
1 5 10 15

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
20 25

<210> 73
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 73

Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu
1 5 10 15

Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
20 25 30

<210> 74
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 74

Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser
1 5 10 15

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
20 25 30

<210> 75
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 75

Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn
1 5 10 15

Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr

20 25 30

<210> 76
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 76

Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile
1 5 10 15

Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu
20 25 30

Thr

<210> 77
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 77

Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro
1 5 10 15

Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr
20 25 30

Glu Thr

<210> 78
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 78

Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His
1 5 10 15

Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys
20 25 30

Tyr Glu Thr
35

<210> 79
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 79

Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys
1 5 10 15

His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr
20 25 30

Cys Tyr Glu Thr
35

<210> 80
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 80

Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn
1 5 10 15

Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys
20 25 30

Thr Cys Tyr Glu Thr
35

<210> 81
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 81

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Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly
1               5                   10                  15

Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr
            20                  25                  30

Cys Thr Cys Tyr Glu Thr
        35
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<210> 82
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 82

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Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys
1               5                   10                  15

Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu
            20                  25                  30

Thr Cys Thr Cys Tyr Glu Thr
        35
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<210> 83
<211> 40
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 83

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Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu
1               5                   10                  15

Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys
            20                  25                  30

Glu Thr Cys Thr Cys Tyr Glu Thr
        35                  40
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<210> 84
<211> 41
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 84

Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp
1 5 10 15

Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn
20 25 30

Cys Glu Thr Cys Thr Cys Tyr Glu Thr
35 40

<210> 85
<211> 42
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 85

Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met
1 5 10 15

Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp
20 25 30

Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
35 40

<210> 86
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 86

Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys
1 5 10 15

Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr
20 25 30

Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
35 40

<210> 87
<211> 44
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 87

Cys Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys
1 5 10 15

Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln
20 25 30

Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
35 40

<210> 88
<211> 45
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 88

Ser Cys Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg
1 5 10 15

Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp
20 25 30

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
35 40 45

<210> 89
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from PCK3145 sequence (polypeptide analog)

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa may be glutamic acid, asparagine or aspartic acid.

<220>
<221> MISC_FEATURE

<222> (4)..(4)
<223> Xaa may be threonine or serine.

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa may be glutamic acid, asparagine, or aspartic acid.

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa may be glutamic acid, asparagine, or aspartic acid.

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa may be threonine or serine.

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa may be threonine or serine.

<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> Xaa may be tyrosine or phenylalanine.

<220>
<221> MISC_FEATURE
<222> (14)..(14)
<223> Xaa may be glutamic acid, asparagine, or aspartic acid.

<220>
<221> MISC_FEATURE
<222> (15)..(15)
<223> Xaa may be threonine or serine.

<400> 89

Xaa Trp Gln Xaa Asp Xaa Cys Xaa Xaa Cys Xaa Cys Xaa Xaa Xaa
1 5 10 15

<210> 90
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Polypeptide derived from PCK3145 sequence (polypeptide analog)

<400> 90

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15


Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
            20                  25                  30


<210>  91
<211>  45
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Polypeptide derived from PCK3145 sequence (polypeptide analog)

<400>  91

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15


Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Trp
            20                  25                  30


Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
        35                  40                  45


<210>  92
<211>  60
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Polypeptide derived from PCK3145 sequence (polypeptide analog)

<400>  92

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu
1               5                   10                  15


Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Trp
            20                  25                  30


Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Trp Gln
        35                  40                  45


Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr
    50                  55                  60
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